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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09:988,054	11/16/2001	Houng Joong Kim	H6810.0039/P039	7847

24998 7590 08/07/2003

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EXAMINER

LE, DANG D

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 08/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/988,054

Applicant(s)

KIM ET AL.

Examiner

Dang D Le

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-75 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-75 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1101. 6) ☐ Other: ____

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it contains the word "comprising" at line 2. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4-9, 12, 14-19, 22, 65, 66, and 68-73 are rejected under 35 U.S.C. 102(b) as being anticipated by Frister (3,713,015).

Regarding claims 1, 2, 4-9, 12, 14-19, 22, 65, 66, and 68-73, Frister shows all of the limitations of the claimed invention in Figures 1-5.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

Art Unit: 2834

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 3, 10, 13, 20, 67, and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frister in view of Nagai et al. (6,084,326).

Regarding claims 3, 13, and 67, Frister shows all of the limitations of the claimed invention except for said shaft having a screw part and said second field magnet having a nut part provided on an inner peripheral side thereof.

Hagai et al. show the shaft having a screw part and the field magnet having a nut part provided on an inner peripheral side thereof (Figure 18) for the purpose of providing an axial movement.

Since Frister and Nagai et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make said shaft with a screw part and said second field magnet with a nut part provided on an inner peripheral side thereof as taught by Nagai et al. for the purpose discussed above.

Regarding claims 10, 20, and 74, it is noted that Nagai et al. also show all of the limitations of the claimed invention.

Art Unit: 2834

7. Claims 11, 21, and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frister in view of Glockner et al. (3,936,685).

Regarding claims 11, 21, and 75, Frister shows all of the limitations of the claimed invention except for an air gap between the rotor having said second field magnet and a stator being greater than that between the rotor having said first field magnet and said stator.

Glockner et al. show different air gaps in Figure 4 for the purpose of increasing axial resultant force.

Since Frister and Glockner et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide an air gap between the rotor having said second field magnet and a stator greater than that between the rotor having said first field magnet and said stator as taught by Glockner et al. for the purpose discussed above.

8. Claims 23, 24, 26-31, 34, 36-41, 44, 45, 47-52, 55, and 57-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frister in view of Jefferies (4,484,083).

Regarding claims 23, 34, 44, and 55, Frister shows all of the limitations of the claimed invention except for a power converter for controlling power of said electric rotary machine, a heat engine, a compressor, a turbine, and a combustor.

Jefferies uses a heat engine with an electrical control for the purpose of making an electric drive train.

Since Frister and Jefferies are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide a power converter for controlling power of said electric rotary machine, a heat engine, a compressor, a turbine, and a combustor as taught by Jefferies for the purpose discussed above.

Regarding claims 24, 26-31, 36-41, 45, 47-52, and 57-62, it is noted that Frister also shows all of the limitations of the claimed invention.

9. Claims 25, 32, 35, 42, 46, 53, 56, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frister in view of Jefferies as respectively applied to claims 23, 34, 44, and 55 above, and further in view of Nagai et al.

Regarding claims 25, 35, 46, and 56, the machine of Frister modified by Jefferies shows all of the limitations of the claimed invention except for said shaft having a screw part and said second field magnet having a nut part provided on an inner peripheral side thereof.

Hagai et al. show the shaft having a screw part and the field magnet having a nut part provided on an inner peripheral side thereof (Figure 18) for the purpose of providing an axial movement.

Since Frister, Jefferies, and Nagai et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make said shaft with a screw part and said second field magnet with a nut part provided on an inner peripheral side thereof as taught by Nagai et al. for the purpose discussed above.

Regarding claims 32, 42, 53, and 63, it is noted that Nagai et al. also show all of the limitations of the claimed invention.

10. Claims 33, 43, 54, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frister in view of Jefferies as respectively applied to claims 23, 34, 44, and 55 above, and further in view of Glockner et al.

Regarding claims 33, 43, 54, and 64, the machine Frister modified by Jefferies shows all of the limitations of the claimed invention except for an air gap between the rotor having said second field magnet and a stator being greater than that between the rotor having said first field magnet and said stator.

Glockner et al. show different air gaps in Figure 4 for the purpose of increasing axial resultant force.

Since Frister, Jefferies, and Glockner et al. are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide an air gap between the rotor having said second field magnet and a stator greater than that between the rotor having said first field magnet and said stator as taught by Glockner et al. for the purpose discussed above.

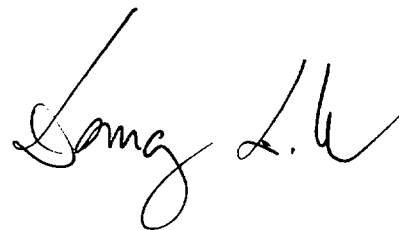
Information on How to Contact USPTO

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (703) 305-0156. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

August 5, 2003

A handwritten signature in black ink, appearing to read 'Dang D Le', with a stylized flourish at the end.

DANG LE
PRIMARY EXAMINER